UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,411	01/16/2002	Michael K. Larkin	SJO920010010US1	6117

			EXAMINER
45216	7590	07/07/2005	AVELLINO, JOSEPH E

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ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _09 June 2005_.

2a) ☒ This action is FINAL.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under _Ex parte Quayle_, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1,2,4-17,19-21,23-28 and 30-36_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1,2,4-17,19-21,24-28,30,31 and 33-36_ is/are rejected.

7) ☒ Claim(s) _23 and 32_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _16 January 2002_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
   application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-2, 4-17, 19-21, 23-28, and 30-36 are presented for examination; claims

1, 8, 15, and 26 independent. The Office acknowledges the cancellation of claims 3,

18, 22, 29 and the addition of claims 33-36.

Allowable Subject Matter

2.   Claims 23 and 32 would be allowable if rewritten to overcome the rejection(s)

under 35 U.S.C. 112, 2nd paragraph, set forth below in this Office action and to include

all of the limitations of the base claim and any intervening claims.

Specification

3.   The amendment filed June 9, 2005 is objected to under 35 U.S.C. 132(a)

because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no

amendment shall introduce new matter into the disclosure of the invention. The added

material which is not supported by the original disclosure is as follows:

p. 11, paragraph starting on line 24: the agent 200 comprises a user interface

module 203, a client selection module 205, and a job relocation module 219.

p. 12, paragraph starting on line 1: the client comprises a job execution module

221 and that the client 202 may be coupled to stub software module 229.

p. 13, paragraph starting on line 24: the client module comprises a job execution

module 221 which may determine which type of job execution queue might be

used to process a particular user request.

Figure 2: the user interface module 203, the Client Selection Module 205, and

the Job Execution Module 221 are supported only by the new matter objected to,

and therefore must be cancelled.

Applicant is required to cancel the new matter in the reply to this Office Action.

4.   The title of the invention is still not descriptive. A new title is required that is

clearly indicative of the invention to which the claims are directed.

The following title is suggested: Intelligent system control agent for managing

jobs on a network by managing a plurality of queues on a client.

Claim Rejections - 35 USC § 103

5.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

Claims 1-2, 4-12, 14-22, 24, 26-31, and 33-36 are rejected under 35 U.S.C.

103(a) as being unpatentable over Doraswamy et al. (USPN 6,128,642) (hereinafter

Doraswamy) in view of Willke (USPN 6,813,767).

6.   Referring to claim 1, Doraswamy discloses an intelligent system control agent
(i.e. local processor station) for coordinating user requested jobs among a plurality of
clients (i.e. remote processor stations), comprising:

a user interface (i.e. import device such as a keyboard) configured to receive
user requests (col. 4, lines 25-35);

a client selection module configured to select one of a plurality of clients to
service a user request according to a predetermined criterion, the clients comprising at
least one queue, each having an individual scheme for prioritizing jobs (e.g. abstract;
col. 9, lines 11-18; col. 9, lines 55-61); and

a communication module configured to submit the user request to the selected
client (col. 9, line 61 to col. 10, line 8).

Doraswamy does not specifically disclose the client comprising a plurality of
queue types, only at least one queue (see above). In analogous art, Willke discloses
another intelligent system control agent wherein the client has a plurality of queue
types, each queue type having an individual scheme for prioritizing jobs (i.e. it is
inherent that a queue has a scheme for prioritizing jobs since a queue inherently
prioritizes jobs by the order in which they arrive   (i.e. priority queue and normal queue)
(Figure 3, ref. 312, 314). It would be obvious to a person of ordinary skill in the art at
the time the invention was made to combine the teaching of Willke with Doraswamy.
The processing engines of Doraswamy would be able to utilize the technique of Willke

to handle transaction requests having different request characteristics as supported by

Willke (col. 1, lines 32-33).

7.   Referring to claim 2, Doraswamy furthermore discloses a system health check

configured to maintain an awareness (i.e. status announcements) of the state of the

selected client (col. 4, line 57 to col. 5, line 10).

8.   Referring to claim 4, Doraswamy furthermore discloses an agent endpoint

module configured to enable the relocation (the Office takes the term "relocation" to be

broadly construed as "shifting the process to another agent") of the system control

agent (the disclosure of Doraswamy states that although the method as performed by a

single local processor station, each processor station in the network also can perform

the same method from its own local perspective, see col. 4, line 59-57).

9.   Referring to claim 5, Doraswamy discloses a federation module configured to

allow cross-communication and interaction between a plurality of system control agents

(i.e. processor stations) (col. 4, line 57 to col. 5, line 10).

10.   Referring to claim 6, Doraswamy discloses a job relocation module configured to

relocate a user requested job form one client to another (i.e. from the local processing

station to a remote processing station) (col. 4, line 57 to col. 5, line 10; col. 9, lines 21-

31).

11.   Referring to claim 7, Doraswamy discloses a state storage module configured to

store the state of jobs being relocated form one client to another (Doraswamy states

that the state information is transferred from the local processor station to the remote

processor station, col. 9, line 61 to col. 10, line 8, which can only occur if it was stored at

the local processor station, thereby inherently providing that there must be a state

storage module configured to store the state of jobs being relocated form one client to

another).

12.   Claims 8, 14-17, 19-21, 24, 26-28, 30-31 are rejected for similar reasons as

stated above.

13.   Referring to claim 9, Doraswamy discloses the invention substantively as

disclosed in claim 8. Doraswamy does not specifically disclose selecting a suitable

queue for each request sent to the client. In analogous art, Willke discloses another

system which determines a suitable queue for each request sent to the client (Figure 3,

ref. 320). It would be obvious to a person of ordinary skill in the art at the time the

invention was made to combine the teaching of Willke with Doraswamy. The

processing engines of Doraswamy would be able to utilize the technique of Willke to

handle transaction requests having different request characteristics as supported by

Willke (col. 1, lines 32-33).

14.   Referring to claim 10, Doraswamy in view of Willke disclose the invention

substantively as described in claim 9. Doraswamy in view of Willke do not specifically

state comprising an asynchronous queue to run requests simultaneously within a

specified client, however it is well known that modern operating systems are

multitasking operating systems, able to run a plurality of jobs in parallel via time slicing

or parallel processing. By this rationale "Official Notice" is taken that both the concepts

and advantages of providing for an asynchronous queue configured to run requests

simultaneously within a specified client are well known and expected in the art. It would

have been obvious to one of ordinary skill in the art to modify the system of Doraswamy

and Willke with an asynchronous queue in order to quickly complete tasks which do not

require exclusivity between the threads, such as write locks or critical code sections,

thereby increasing the throughput of the system and reducing overall system overhead.

15.   Referring to claim 11, Doraswamy in view of Willke disclose the invention

substantively as described in claim 9. Doraswamy in view of Willke do not specifically

state comprising a synchronous queue configured to run requests in the order the

requests were received by a specified client, however it is well known that FIFO (First-

In-First-Out) queues allow requests to run in order they are received. By this rationale

"Official Notice" is taken that both the concepts and advantages of providing for a

synchronous queue configured to run requests in the order the requests are received is

well known and expected in the art. It would have been obvious to one of ordinary skill

in the art to modify the teaching of Doraswamy and Willke to provide order to the

requests, and ensuring that the oldest request is handled first, thereby providing that no

job is starved for service, which thereby increases throughput and reducing overall

system overhead.

16.   Referring to claim 12, Doraswamy in view of Willke disclose the invention

substantively as described in claim 9. Doraswamy in view of Willke do not specifically

state comprising an exclusive queue to run requests exclusive of any other requests in

any other queue on the system, however it is well known that exclusive queues exits,

which provide for locking mechanisms of critical code or write operations which will

become corrupted if not run atomically (which is the term in the art for running a task or

thread without interruption). By this rationale, "Official Notice" is taken that both the

concepts and advantages of providing for an exclusive queue to run requests exclusive

of any other requests in any other queue on the system is well known and expected in

the art. It would have been obvious to one of ordinary skill in the art to provide for an

exclusive queue to run requests exclusive of any other requests in any other queue on

the system to ensure that operations requiring access to critical sections of code are not

corrupted by other jobs and also for providing exclusive access to operations which

would corrupt data if executed in a racing condition with other threads, thereby providing

data reliability, ensuring required operations are completed and reducing overall system

downtime due to data corruption.

17.   Regarding claims 33-36, Doraswamy in view of Willke disclose the invention

substantively as described above. Doraswamy in view of Willke do not specifically

disclose each client has at least three queue types, rather Willke discloses a normal

queue and a priority queue, however it is well known in process and packet scheduling

arts that any number of queues can be utilized, each with its own priority (i.e. highest,

high, and normal). By this rationale, "Official Notice" is taken that both the concept and

advantages of providing for three or more queues is well known and expected in the art.

It would have been obvious to one of ordinary skill in the art to modify the teaching of

Willke to utilize three queues instead of two queues in order to further classify requests

into a more detailed queue reserving the highest priority queue for the utmost important

requests, thereby reducing system overhead as well as increasing throughput of the

system.

        Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Doraswamy in view of Willke as applied to claim 8 above, and further in view of Stamm

et al. (USPN 6,711,616) (hereinafter Stamm).

18.   Doraswamy in view of Willke disclose the invention substantively as described in

claim 8. Doraswamy in view of Willke do not specifically disclose stub software to

control execution of a request residing on a specified client. In analogous art, Stamm

discloses another method of controlling a client which includes stub software to control

execution of a request residing on a specified client (i.e. monitoring software) (col. 3,

line 57 to col. 4, line 4). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Stamm with Doraswamy and Willke in order to more efficiently offload tasks from strained machines to idle machines, thereby improving performance and throughput.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doraswamy in view of Willke as applied to claim 24 above, and further in view of Cajolet (USPN 6,192,388).

19.   Doraswamy in view of Willke disclose the invention substantively as described in claim 24. Doraswamy in view of Willke do not specifically state transferring a request by sending requests to state storage system by a client, sending instructions to a new client to access requests, accessing requests from the state storage by the new client, and relocating the request to the new client station. In analogous art, Cajolet discloses another system control agent which transfers a request by instructing a client to relocate a current requests by a system administrator (i.e. a local user); sending requests to a state storage system (i.e. dispatcher) by a client; sending instructions to a new client to access requests from the state storage system by the agent; accessing requests from the state storage system by the new client; and relocating the requests to the new client station (col. 9, lines 15-30). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Cajolet with Dorasamy and Willke in order to quickly execute complex computational tasks using only those

computers that are available and have the appropriate capabilities to execute the task

as supported by Cajolet (e.g. abstract).

Response to Arguments

20.   Applicant's arguments filed June 9, 2005 have been fully considered but they are

not persuasive.

21.   In the remarks, Applicant argues, in substance, that (1) Willke teaches away from

queues distributed among a plurality of clients, (2) Stamm teaches away from

submitting the user request to the selected client since the client requests tasks from a

server.

22.   As to point (1) the Office is not relying upon Willke to teach the feature of queues

distributed among a plurality of clients. Applicant will notice that Doraswamy discloses

queues distributed among a plurality of clients (see rejection above). By this rationale,

the rejection is maintained.

23.   As to point (2) the Office is not relying upon Stamm to teach the feature of

submitting the user request to the selected client. Applicant will notice that Doraswamy

discloses submitting the user request to the selected client (see rejection above).

Furthermore the concept of automatically sending user requests to the selected client is

well known in the art (see Doraswamy) and would just be an obvious design choice

whether to have the client request tasks to execute or for the server to automatically push tasks to the client. By this rationale, the rejection is maintained.

Conclusion

24.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

25.   Applicant has failed to seasonably challenge the Examiner's assertions of well known subject matter in the previous Office action(s) pursuant to the requirements set forth under MPEP §2144.03. A "seasonable challenge" is an explicit demand for evidence set forth by Applicant in the next response. Accordingly, the claim limitations the Examiner considered as "well known" in the first Office action are now established as admitted prior art of record for the course of the prosecution. See In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943).

26.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JEA
June 15, 2005

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